

"Ain't Nothin' Like the Real Thing": Motown Meets Millennials

An Honors Thesis (HON 499)

by

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A handwritten signature in black ink, appearing to read "Stan Sollars", with a stylized, cursive script.

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Abstract

There is no denying the signature sound and feel of the music that came out of Motown and "Hitsville U.S.A". This distinctive and classic sound came from a combination of analog engineering techniques, talented musicians, and occasionally, pure coincidence. Since then, audio production has moved into the digital world, leaving analog tape techniques in the past. Production techniques are not the only musical aspect that has changed over time; song structure and chord progressions in modern music vary greatly in comparison to the more simple songs of the Motown era. For this project, I looked into Motown recording, mixing, and mastering techniques. I rewrote parts for five modern songs in order to emphasize the vintage feel, and then I applied the researched Motown recording techniques during production. Included is a disc of my chosen five modern songs with a Motown twist.

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I would like to thank my parents for sparking my love for and continued interest in the Motown era.

Finally, I would like to thank anyone who suggested a friend or friend-of-a-friend for this project. Motown was all about friendships and helping one another; this project brought so many friends together, old and new. I am very proud and thankful for such a positive group of people. Thank you all.

Author's Statement

Growing up, my parents always had music playing. More often than not, one could hear Diana Ross and the Supremes, the Temptations, or Marvin Gaye flowing through the house. When asked, "Why Motown?" it mainly comes down to my deeply rooted love of the musical era. Once I began my studies in music production, the style became even more intriguing to me, this time from a technical aspect. I decided the best way to truly learn the engineering techniques behind these beloved songs would be to attempt the style myself.

I started with a list of ten modern day songs, most of them Top 40 radio hits. These songs were chosen with a slight bias, because many of them I already love. Aside from that, I tried to choose songs that had a bit of the Motown feel or at least a similar song structure. My initial goals were to choose anywhere between three and five of these tunes to rework and engineer as if they were Motown songs.

The final song list is as follows:

- "Hold On, We're Going Home" – Drake
- "Walking With a Ghost" – Tegan and Sara
- "Countdown" – Beyoncé
- "Thinkin' 'Bout You" – Frank Ocean
- "Your Apartment" – Jenny Owen Youngs

Drake, Frank Ocean, and Beyoncé already have a very R&B/hip-hop feel. At times, their music clearly is influenced by 60s soul and the Motown era. These were the easier choices. Jenny Owen Youngs and Tegan and Sara, however, are more folk-influenced. These choices were more of a stretch.

Because I wanted to focus on the engineering for this project, I knew that success would rely heavily upon my musician friends and acquaintances. Without their performances, this project would simply not work. With this in mind, I kept my goal for number of songs low, because aligning up to four different schedules per session is not an easy feat.

Although the main purpose of this project was engineering and audio editing, mixing, and mastering, I realized that composition would come into play as well. Once I had my chosen song list, it became apparent that simply using vintage microphones and 1960s recording techniques on a Beyoncé cover would not in itself create a Motown-esque tune. It would still sound like a modern Beyoncé song. Realizing this minor issue, I decided to rework each cover, altering parts to have a 60s-style vibe, while still keeping the original song structure and chord progressions. For some tracks, I wrote parts for a string trio or even a horn quartet.

At this point it is important to note that prior to this thesis, I had no compositional experience. This project forced me to dive further into music theory than I had before, and it was very challenging. I am thankful for the experience, though, as I think it turned out well for an initial foray into composition.

Using the music streaming application Spotify, I began to create a research playlist. I chose anywhere between one and three Motown songs per each of my modern songs for inspiration and reference. Here are some of the bigger influences per each chosen song:

- “Hold On, We’re Going Home” – Drake
 - “Mercy, Mercy Me” – Marvin Gaye
 - “Everybody Plays the Fool” – the Main Ingredient
 - “What’s Going On” – Marvin Gaye
- “Countdown” – Beyoncé
 - “Nobody Knows What’s Going on (In My Mind But Me)” – the Chiffons
 - “Heatwave” – Martha and the Vandellas
- “Thinkin’ ‘Bout You” – Frank Ocean
 - “Baby I Need Your Loving” – Four Tops
 - “Tired of Being Alone” – Al Green
- “Your Apartment” – Jenny Owen Youngs
 - “All I Do is Think About You” – Tammi Terrell
 - “I Second That Emotion” – Smokey Robinson
- “Walking With a Ghost” – Tegan and Sara
 - “Love is Here and Now You’re Gone” – Diana Ross and the Supremes
 - “Then He Kissed Me” – the Crystals
 - “This Old Heart of Mine (Is Weak For You)” – the Isley Brothers

Of all parts of this project, the rewrite process took the longest. A few times I became quite frustrated, wondering if I should have chosen a different project. Throughout the frustration, though, I always knew this was the project for me. It took awhile to find a topic that really spoke to me and elicited true passion, so even through the most trying parts of this process, I knew that giving up was not an option.

Armed with a borrowed keyboard, I wrote all parts of each song via MIDI, which is essentially those silly instrument voices you can choose on most keyboards. I even recorded the vocal line with the keyboard, since I cannot sing at all. The process was rather slow going until I decided to kick myself into gear and pull an all-nighter in February. It was one of those nights where I began to wonder if anything I had worked on would be useable in the morning, but thankfully everything turned out well. I would like to thank coffee and my housemate for keeping me sane that night. I would also like to apologize to my housemate for having to keep me sane that night.

Throughout this frustration, I never became sick of the Motown tunes or the modern songs I had picked. Going into the project I had hoped it would not be too much Motown music consumption, but I can gladly say I loved every minute of working on this project.

The hardest parts of the rewrite process were absolutely the string and horn sections. Not only did I come into this project with a basic knowledge of

general music theory; I knew nothing about writing for trios, quartets, or any groups of musicians. A cellist friend from the school of music sat down with coffee and a notes page and gave me a crash course on string arrangement. I would have taken a total shot in the dark without his guidance. Another friend who marches trombone for drum corps during the summers did the same for horn arrangements. Once I had their notes in mind, writing those parts was much less daunting. The parts are nothing fancy, but I think they work well for the songs and stay true to the Motown style.

The next big hurdle was seeking out willing and talented musicians. This part was especially tricky, because I had to look for musicians who not only could quickly track these tunes in preferably one session, but also those who were familiar with the style. Right off the bat I found my rhythm section. Alex Dobbert, who is one of my audio mentors, played drums, and Pat Hannon, an old band mate, played bass. Guitar was easy for me to find in Isaac Vining, a new friend.

After the main parts were filled, it became more difficult to find musicians. Suddenly I was frantically flipping through my mental rolodex of musicians for string and horn players and singers. For these, I looked to social media. A few well-timed Facebook posts found me a few singers, and the rest were friends-of-friends.

I really loved the “friends-of-friends” networking that occurred. I have known for awhile that Motown was all about musical community and truly being close with your band mates, employees, label musicians, etc.; it means so much that this style of music brought people together again. I certainly can say that I have made many new friends after this project. This project is a thesis in that it is a culmination all of my engineering knowledge as of now, but it also is a thesis because it is a culmination of my musical friendships. I think that is really neat.

There was some overlap between the long search for musicians and tracking. I began tracking the last weekend of February at the Varsity Recording Co. in Anderson with Pat and Alex, our bassist and drummer. Pat played a Fender Precision bass that was taken direct-in to an Apollo pre-amp. For some songs, we put a chunk of foam underneath his strings to deaden them and flatten the sound. Alex played a beautiful 1960’s Ludwig drumkit with a Rogers’ snare. On the drumkit, I placed only two microphones. There was one RE20 out about two feet front the front of the kick drum, and there was an RE15 as an overhead, hovering above the snare next to Alex’s head. For both, I added Putnam 610 pre-amp emulation, a Fairchild compressor emulator for color, Studer tape machine emulation. The tape emulation was pushed into the red in order to get that Motown distorted tape effect.

Guitar was taken direct-in as well. Isaac played two different guitars, a Gibson Sheraton and a Fender Telecaster. The guitar had very similar treatment as the bass and drums, but I added a Pultec EQ emulator for color. Guitar was also captured at the Varsity in Anderson.

I played the auxiliary percussion myself. The tambourine, claves, and glockenspiel were recorded with an RE15 with no treatment before the mixing stage. The microphone was aimed directly at the source. Vibraphone was MIDI, only because the MIDI instrument emulation for the vibes was spot-on. For

timpani I ventured into the percussion studio with an AKG 414 EB microphone. It was about two feet above the timpani drumheads, aimed downward at a slight angle. The polar pattern on the microphone was set to “figure-eight”, and there was a -10dB pad on it, since the drums were so loud. A similar setup was used for the congas, also tracked in the percussion studios. For congas, I put a 75Hz high-pass filter on the 414, along with a super-cardioid polar pattern. (Many thanks to my friend Peyton Cox for access to the percussion studio.)

Tracking strings was a rather large production. We set up in Ball State’s TCOM Studio B. I brought six microphones to experiment with, but I ended up using them all. Three microphones were set up about four or five feet away from the performers to capture room tone and the ensemble as a whole. Two 414 EBs were set up to aimed toward the left and right of the trio. These were both at a “figure-eight” polar pattern and a 75Hz high-pass filter. A dynamic omnidirectional RE55 was set in the center, aimed directly in the middle of the trio.

Along with our room microphones, I decided to close-mic the instruments as well, and I think it turned out very nicely. Since viola players are apparently a rare breed, I had a violin substitute in for the viola parts. We ended up with one cello and two violins (Peter Timberlake, Sean Ashcraft, and Nick Marchi, respectively), for those of you keeping score at home. I used a Shure SM57 right by the f-hole of one violin, and an Electro-voice 635A in the same placement on another. For the cello, I used an RE15 on the f-hole.

The string parts were fairly simple, but I had the performers track each part twice in order to create the illusion of a larger string section. When mixed with some reverb later in the production process, this worked out well. When they tracked, the players used performance mutes on their strings. If they did not have a mute, I let them borrow a dollar to fold up and stick under the strings near the bridge. When it comes to signal flow on the string session, I had each microphone running through the Aphex 1788 pre-amps in Studio B.

Horns were another huge production to track. When the stars aligned and our schedules worked well, we got together one evening in Studio B. It was myself, Cole Stewart on baritone saxophone, Jay Higginson on trumpet, and Max Johnson on trombone. To capture this session, I had 414 EBs on Cole’s baritone and Jay’s trumpet and a 414 ULS on Max’s trombone. All were set to cardioid polar pattern, with a -10dB pad and 75Hz high-pass cut. Each mic was set at a safe distance, as to not blow out the capsule. Another precaution was taken in aiming the microphones slightly off-axis to the horns’ bells. Along with these microphones, I set up the RE55 again for room tone. Like the string session, I ran these microphones through the Aphex 1788 pre-amps.

The next day I added a tenor saxophone (James Middleton) in Studio B to the already-tracked horn section. He also performed flute for “Hold On, We’re Going Home.” For both instruments, I used a Royer 122 ribbon microphone, since it sounded so dark and smooth. Along with the Royer, I again set up the RE55 at a distance for room tone.

Vocals were the simplest to track, naturally. For most lead parts, I used an older 414 EB, with a cardioid polar pattern and 75Hz high-pass cut. Most parts were tracked in Studio B, through an Aphex tube pre-amp for added warmth.

Backing vocals were recording in a number of places, mainly my off-campus home. I set up a somewhat acoustically dead space, and we tracked. Considering our circumstances, the parts turned out just fine. The 414 EB was used for most of these sessions, as well.

Much of the vintage tone came from the mixing process. Added tape emulation pushed slightly into distortion, along with a nice amount of reverb, made the vocals sound older. If any parts needed a bit more crunch, I would add that tape emulation. Almost everything got sent to a nice long plate reverb, especially strings and vocals. Aside from those things, I made some more extreme cuts to the EQ on each instrument. I cut the low end up to 70Hz and the high end anywhere between 8 and 10kHz. Any cuts less than this made the songs sound too clean, bright, and modern. For all of this, I used no stereo panning at all. Initially I tried to pan tracks out, but panning made the songs sound less Motown and more modern day. Although mixing in mono was much more difficult, I think it was the right decision for this project.

It is clear that I learned a lot about Motown-style skill-based concepts like microphone placement and editing technique. The most interesting thing to me, though, was all about the song structures. I never went in aiming for a particular era or Motown group to emulate. Of course I did have my influencing songs, but that was mostly for inspiration and instrumentation. When I finished, I was left with five songs that all could have come out of different Motown time periods. To me, "Walking With a Ghost" sounds like it could have been a very early Motown release, circa 1964. Conversely, "Hold On, We're Going Home" sounds like late-1960s Motown to me. When it comes to songs like "Countdown," the Motown effect did not completely stick the dismount.

Although I do not at all regret choosing the particular song, it did not translate as well as I had hoped. I do not think this has anything to do with any production choices on my part; I believe it is simply the nature of such a modern sounding song. Rewriting the tune a bit helped, as did adding horns and the vintage feel in post-production. However, the song's elements (a unique and choppy structure and very modern chord progression) are strongly tied with today's music styles, and therefore keep it anchored in the present. A lot more rewriting work would need to be done in order for it to really sound like a Motown song. At that point, though, it would be a different song entirely.

Looking at how the songs morphed throughout the process was one of my favorite parts of the project. Every time I added a new part, whether it was a big string section or a minor backing vocal, it made me so excited. This was such a fun project. I am so glad I could share the experience with so many friends, old and new, and I am extremely excited to share this with everyone.